

ABSTRACT

Mobile Ad Hoc Network (MANETs) is a wireless network of mobile nodes without a superior node in it. Manet has a pattern of network topology which always changing rapidly and unpredictable. Network conditions such as these lead to the need for a data packet transmission algorithm that can adapt to these changes. There are two main types of routing algorithms in Manet, Table-Driven (Pro-active) and reactive routing. TORA is type of reactive routing in which temporally-Ordered Routing Algorithm (TORA) which always does a search path when there are requests deliveries of data packets. While the Fisheye State Routing (FSR) is a pro-active algorithm that will do routing table updates periodically.

TORA and FSR performance measurement can be used to determine the level of effectiveness of this routing algorithm is applied on an ad hoc wireless networks. This measurement is expected can show the network characteristics that are suitable for both of these algorithms before we use it. This final project will built FSR and TORA simulation as a tool of analysis that aims to produce the recommendations on the implementation of the TORA routing algorithm and FSR.

Simulation results show that the performance level of both algorithms is influenced by movement speed and density of nodes in the network. Meanwhile the overhead in both of these algorithms show different results. Overhead in TORA is still influenced by the speed of movement of nodes and the number of nodes in the network while the overhead on the FSR is only affected by the density of nodes in the network.

Keywords: Mobile Ad Hoc Networks (MANETs), wireless, superior nodes, topology, table driven (proactive), reactive, temporally-Ordered Routing Algorithm (TORA), fisheye State Routing (FSR), performance, implementation.